

C A M B R I A

November 23, 2005

Mr. James Strozier
Orange County Health Care Agency
Environmental Health Division
1241 East Dyer Road, Suite 120
Santa Ana, California 92705-5611



Re: **Well Abandonment Report**
Chevron Service Station 9-2225
26302 Oso Parkway
Mission Viejo, California
Former Case No. 91UT100

Dear Mr. Strozier,

On behalf of Chevron Environmental Management Company, Cambria Environmental Technology, Incorporated (Cambria) is submitting this report to document the proper abandonment of the five former groundwater monitoring wells for the site referenced above. This work was conducted in response to the *Closure Letter* dated September 29, 2005 from the Orange County Health Care Agency (OCHCA) which is included as Attachment A.

Former groundwater monitoring wells MW-24 through MW-28 were properly destroyed on October 26 and 27, 2005 by BC2 Environmental Corporation of Fullerton, California. The former well locations are shown on the included Figure. The annulus of each well was cleared to 8 feet using an air knife and then pressure grouted to the total depth of each well using a mixture of Ready Mix, Quickset and Portland Cement. The upper 5 feet of each well casing was then over-drilled and the boring filled with cement. A copy of the well destruction permit is included as Attachment B.

**Cambria
Environmental
Technology, Inc.**

18 Technology Drive
Suite 167
Irvine, CA 92618
Tel (949) 589-6640
Fax (949) 589-6774

C A M B R I A

Mr. James Strozier
November 28, 2005

We appreciate the opportunity to have worked with you on this project. Please contact me at (949) 428-8992 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc.



Lynleigh Lowry
Lynleigh Lowry, P.G. 7870
Senior Project Geologist

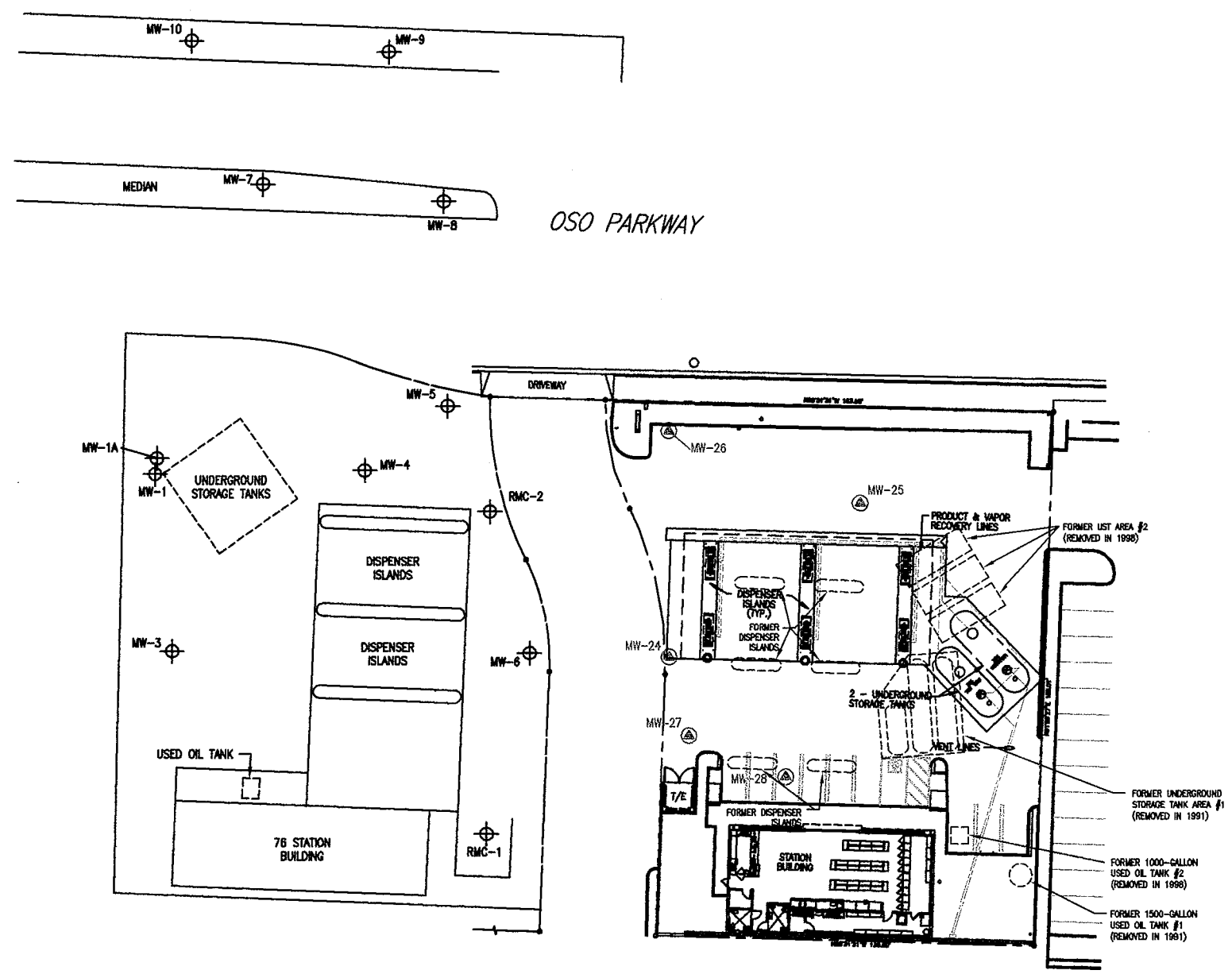


Figure: Site Plan

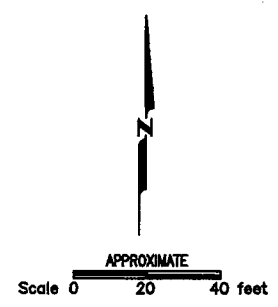
Attachments: A – OCHCA Closure Letter
B – Well Destruction Permit

cc: Mr. Dana Thurman, Chevron Environmental Management Company, PO Box 6012,
K2236, San Ramon, CA 94583

DATE PLOTTED: 1/9/03 1 = 40
FILE: K:\DWG\PL\HIA\CAD\50240\NEW-BASEMAP\9-2225-0802-BASE



- EXPLANATION**
- MW-26 (Symbol) GROUNDWATER MONITORING WELL LOCATION (CHEVRON SITE)
 - (Symbol) GROUNDWATER MONITORING WELL LOCATION (76 SITE)



GROUNDWATER ELEVATION
IN FEET MEAN SEA LEVEL

GROUNDWATER ELEVATION CONTOUR
IN FEET MEAN SEA LEVEL

APPROXIMATE DIRECTION OF GROUNDWATER FLOW
(APPROXIMATE HYDRAULIC GRADIENT = 0.03 FT/FT)

NOTES:

1. ALL CONTOUR LINES ARE AN INTERPRETATION BASED ON THE RESULTS OF THE WELL GAUGING DATA FOR THIS QUARTER.
2. GROUNDWATER ELEVATIONS HAVE BEEN INCLUDED FROM ADJACENT PHILIPS SITE 6399 (MW-1 NOT USED TO CALCULATE THE GROUNDWATER CONTOUR).

MW-1	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE [TPHg] (8015M)
<100	BENZENE (8260B)
<1	METHYL TERTIARY BUTYL ETHER [MTBE] (8260B)
<1	ANALYTE NOT DETECTED BELOW DETECTION LIMIT
NS	NOT SAMPLED

ISOCONCENTRATION CONTOUR LINES

- <100 ----- TPHg CONCENTRATION CONTOUR IN ug/L
- <1 ----- BENZENE CONCENTRATION CONTOUR IN ug/L
- <1 ----- MTBE CONCENTRATION CONTOUR IN ug/L

NOTES:

1. "J" DENOTES VALUE BETWEEN METHOD DETECTION LIMIT AND DETECTION LIMIT FOR REPORTING.
2. ALL UNITS IN MICROGRAMS PER LITER (ug/L).
3. ALL CONTOUR LINES ARE AN INTERPRETATION BASED ON THE RESULTS OF WATER SAMPLES COLLECTED FOR THIS QUARTER.
4. CONTOUR LINES WITH "<" SYMBOL INDICATE THE CONTOUR LINE WHERE THE CONCENTRATION WAS BELOW THE METHOD DETECTION LIMIT.

COORDINATE LISTING

NAME	NORTH	EAST	TOR	TOC
MW-24	2157461.31	8128999.33	378.98	378.48
MW-25	2157844.27	8129008.98	378.98	378.47
MW-26	2157840.18	8129001.50	378.08	377.28
MW-27	2157483.65	8129008.92	377.79	377.58
MW-28	2157446.34	8129042.04	378.04	377.82

2171 CAMPUS DRIVE, SUITE 100
IRVINE, CA 92612

DWG BY
JTL
DATE
6/01
REV BY
BAR/JTL
REVISED
9/02

SITE PLAN

Chevron Products Company
Service Station No. 9-2225
26302 Oso Parkway
Mission Viejo, California

PLATE NO.

PROJECT NO.
50240-73.21

C A M B R I A



ATTACHMENT A

OCHCA Closure Letter



**COUNTY OF ORANGE
HEALTH CARE AGENCY**

**REGULATORY HEALTH SERVICES
ENVIRONMENTAL HEALTH**



JULIETTE A. POULSON, RN, MN
DIRECTOR

DAVID L. RILEY
ASSISTANT DIRECTOR

MIKE SPURGEON
DEPUTY AGENCY DIRECTOR
REGULATORY HEALTH SERVICES

STEVEN K. WONG, REHS, MPH
DIRECTOR
ENVIRONMENTAL HEALTH

MAILING ADDRESS:
1241 EAST DYER ROAD, SUITE 120
SANTA ANA, CA 92705-5611

TELEPHONE: (714) 433-6000
FAX: (714) 754-1732
E-MAIL: ehealth@ochca.com

September 29, 2005

Dana Thurman
ChevronTexaco
6001 Bollinger Canyon Rd. K-2236
San Ramon, CA 94583

Subject: Remedial Action Completion Certification

Re: Underground Storage Tank (UST) Case
Chevron Station
26302 Oso Parkway, Mission Viejo, CA
O.C.H.C.A. Case #91UT100

Dear Mr. Thurman:

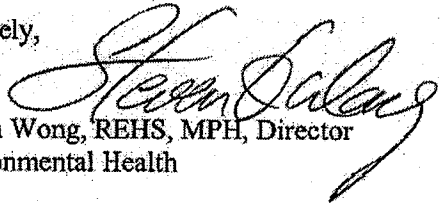
This letter confirms the completion of site investigation and corrective action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the underground storage tanks are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this Agency was accurate and representative of site conditions, this Agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25296.10 of the Health and Safety Code.

Please contact James Strozier of our office at (714) 433-6264 if you have any questions regarding this matter.

Sincerely,


Steven Wong, REHS, MPH, Director
Environmental Health

SW:jcs

Attachment: Case Closure Summary

cc. John Odermatt, San Diego Regional Water Quality Control Board
SB 562 Database, State Water Resources Control Board
Cleanup Fund Manager, State Water Resources Control Board
Larry Honeybourne, Environmental Health

Case Closure Summary

Leaking Underground Fuel Tank Program

I. Agency Information

Date: May 23, 2005

Agency Name: Orange County Health Care Agency	Address: 1241 East Dyer Avenue
City/State/Zip: Santa Ana, CA 92705	Phone: (714) 433-6264
Responsible staff person: James Strozler	Title: Hazardous Waste Specialist

II. Case Information

Site Facility Name: Chevron Station				
Site Facility Address: 26302 Oso Parkway, Mission Viejo, CA				
RB LUSTIS Case No.:		Local Case No.: RO0001981	LOP Case No.: 91UT100	
URF Filing Date:		SWEEPS No.		
Responsible Party		Address	Phone Number	
ChevronTexaco		6001 Bollinger Canyon Rd, San Ramon, CA	(925) 842-9559	
Dana Thurman				
Tank No	Size in Gal.	Contents	Closed in-Place/Removed?	Date
1	10,000	Gasoline	Removed	9-11-91
2	10,000	Gasoline	Removed	9-11-91
3	6,000	Gasoline	Removed	9-11-91
4	12,000	Gasoline	Removed	6-19-98
5	12,000	Gasoline	Removed	6-19-98
6	12,000	Gasoline	Removed	6-19-98

III. Release and Site Characterization Information

Cause and type of release: Tank and piping/dispenser			
Site characterization complete? Yes		Date approved by oversight agency: 7-1-04	
Monitoring wells installed? Yes	Number: 7	Proper screened interval? Yes.	
Highest GW depth BGS: 36.7 ft.		Lowest depth: 47.4 ft.	Flow direction: Southwest
Most sensitive current use: Municipal and Domestic Supply			
Are drinking water wells affected? No		Aquifer name:	
Is surface water affected? No		Nearest/affected SW name: La Paz Creek	
Off-site beneficial use impacts (addresses/locations):			
Report(s) on file? Yes		Where is report(s) filed? OCHCA	
Treatment and Disposal of Affected Material			
Material	Amount (include Units)	Action (treatment or disposal/destination)	Date
Tank	3 Tanks	LA Industrial Service, Gardena, CA	9-11-91
	3 Tanks	American Metal Recycling, Ontario, CA	6-23-98
Soil	891 cubic yards	TPS Technologies, Adelanto, CA	5-97 & 6-98
Soil Vapor	80 pounds HC vapor	Vapor extraction test	August 1991

Case Closure Summary Leaking Underground Fuel Storage Tank Program

Case#: 91UT100
Date: May 23, 2005

III. Release and Site Characterization Information (Continued)


Maximum Documented Contaminant Concentrations - - Before and After Cleanup									
Contaminant	Soil (ppm)		Water (ppm)		Contaminant	Soil (ppm)		Water (ppm)	
	Before	After	Before	After		Before	After	Before	After
TPH (gas)	8,700	5,022	213	28	MTBE (8020)	4.6	2.4	8.6	not analyzed
Benzene	40	40	22	4.6	MTBE (8260)	not analyzed	not analyzed	2.18	0.800
Toluene	550	300	89	18	TBA	not analyzed	not analyzed	0.683	0.150
Xylene	1,000	480	26	9.1	ETBE	not analyzed	not analyzed		<0.002
Ethylbenzene	160	80	5.56	3.2	DIPE	not analyzed	not analyzed		<0.002
					TAME	not analyzed	not analyzed		<0.002

Comments (Depth of Remediation, etc.): In October 1990, a supreme unleaded gasoline tank failed an annual tank integrity test. In August 1991, twenty-two soil borings were drilled at the site that showed the presence of elevated concentrations of hydrocarbons (maximum 2,700 ppm TPH, and 40 ppm benzene). Of these borings, one was completed as a groundwater monitoring well and nine as vadose zone wells for possible remediation. Also in August, a vapor extraction test was conducted that removed approximately 80 lbs. of hydrocarbons from the soils. In September 1991, the three gasoline tanks were removed and replaced with three 12,000 gallon USTs. Soil samples collected from below the tanks detected a maximum of 800 ppm TPH and 4.3 ppm benzene. Samples collected from the dispenser area detected a maximum of 5,022 ppm TPH, 0.14 ppm benzene, and 330 ppm xylene. Additional assessment was conducted in April 1993 by conducting eight CPT borings. The maximum contamination detected was 42 ppm TPH and 1.1 ppm benzene. Over the next several years additional groundwater monitoring wells were installed across the site and another vapor extraction test was conducted. Vapor extraction was never initiated at the site due to the consultant's concerns regarding an adjacent site that had large amounts of free product present in close (continued next page)

IV. Closure

Does completed corrective action protect <i>existing</i> beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect <i>potential</i> beneficial uses per the Regional Board Basin Plan? Yes		
Does corrective action protect public health for current land use? Yes (Active Service Station)		
Site management requirements: None		
Should corrective action be reviewed if land use changes? Yes		
Monitoring wells decommissioned: No	Number decommissioned:	Number Retained: 5
List enforcement actions taken: None		
List enforcement actions rescinded:		

V. Local Agency Representative Data

Name: James Strozier	Title: Hazardous Waste Specialist
Signature: 	Date: 5-23-05

VI. RWQCB Notification

Date Submitted to RB: 7/13/05	RB Response: Concurs with Closure
RWQCB Staff Name: Jody Ebsen	Title: Engineering Geologist
Signature:	Date: 9/22/05

Case Closure Summary (continued)

Case#: 91UT100

Date: May 23, 2005

VII. Additional Comments, Data, etc.

proximity to the Chevron site. In May 1997, dispenser and piping upgrade activities were conducted which allowed the removal of a limited amount of contaminated soil (approximately 41 cubic yards). A maximum of 8,700 ppm TPH and 40 ppm benzene were detected. In June 1998, the three 12,000 gallon gasoline tanks and associated piping and dispensers were removed and the station remodeled. These activities allowed the remedial excavation of contaminated soils from the tank areas and piping and dispenser areas. Approximately 850 cubic yards of contaminated soil was excavated and transported offsite for disposal/treatment. In 1999, two additional wells were installed to replace ones destroyed in the excavation process (MW-27 & 28). In 2001, joint quarterly groundwater monitoring began for the Chevron and adjacent Unocal 76 stations to better delineate the plumes across both sites.

The source zone for the BTXE plume at the site has been mainly centered around the former tanks and dispenser area. However, the close proximity of the large free product plume (NAPL) at the Unocal 76 Station (immediately adjacent to the site) may have impacted the Chevron perimeter wells. This Unocal site (OCLOP Case # 92UT130) is currently undergoing remediation to remove the source zone and to recover the free product plume on and off-site.

Both the Chevron station and the Unocal 76 station are located by an on-ramp of the north-bound side of the I-5 freeway. La Paz Creek and Oso Creek are located approximately 790 feet west and 1,050 feet southeast of the site, respectively. Both sites are located on a hillside at a substantial elevation above the two creeks.

The site is located in a portion of basin that is designated as municipal and domestic supply by the San Diego Regional Water Quality Control Board

The consultant has conducted evaluations to demonstrate that the remaining soil and groundwater contamination does not pose a risk to public health, surface waters, or groundwater resources and has reviewed the site history for both the Chevron and Unocal 76 sites to try to demonstrate that the site's groundwater has been directly affected by the large free product plume at the adjacent Unocal 76 Station. (SAIC, May 28, 2004 Site Evaluation And Recommendations). Based on these evaluations and review of the data, the consultant has made the following conclusions:

1. NAPL has been present at the 76 station since the discovery of a leaking dispenser in 1992. Historically, NAPL has been detected at a maximum thickness of 15.38 feet in MW-4 (76 station) in December 1994. Presently, a pool of NAPL covers the northern part of the 76 station ranging in thickness from 0.02 to 2.55 feet (correct at time of report: current thickness ranges from 0.01 to 1.32 feet). Currently, a total of 1,134 gallons of NAPL have been removed from the 76 station.
2. NAPL has been observed in well MW-24 at the Chevron site on five occasions between March 1994 and June 1996. The free product thickness was 0.03 feet in March 1994 and was not measured on the other dates.
3. The Lawrence Livermore National Laboratory plume study found that petroleum plume lengths tend to stabilize at relatively short distances, rarely exceeding 260 feet in length. Based on the study, dissolved phase petroleum hydrocarbons would degrade to non-detectable concentrations approximately 530 feet up-gradient of La Paz Creek. Additionally, the NAPL plume associated with the 76 station is directly down-gradient of the Chevron station.
4. Due to the removal of near-surface petroleum hydrocarbon affected soil, the low concentrations of residual petroleum hydrocarbons in near-surface soils, and the soil type where these concentrations remain (silt and clay), it is not anticipated that hydrocarbon vapors from the Chevron site could migrate to utility enclosures.

C A M B R I A



ATTACHMENT B

Well Destruction Permit

APPLICATION FOR WELL DESTRUCTION PERMIT

ORANGE COUNTY HEALTH CARE AGENCY
ENVIRONMENTAL HEALTH DIVISION1241 E. DYER ROAD, SUITE 120
SANTA ANA, CA 92705-4720(714) 433-8000
FAX: (714) 433-5481

CITY <u>Mission Viejo</u>		DATE <u>10/20/05</u>	
WELL LOCATION (ADDRESS IF AVAILABLE) <u>26302 Oso Parkway (SEE FIGURE)</u>			
NAME OF WELL OWNER <u>Chevron</u>		NAME OF CONSULTING FIRM <u>Cambridge Environmental Technology</u>	
ADDRESS <u>26302 Oso Parkway</u>		BUSINESS ADDRESS <u>18 Technology Dr., Suite 167</u>	
CITY <u>Mission Viejo</u>	ZIP <u>92691</u>	CITY <u>Irvine</u>	ZIP <u>92618</u> TELEPHONE <u>(949) 428-8993</u>
NAME OF DRILLING CO. <u>BC2</u>		C-57 LICENSE NUMBER	
CITY <u>Fullerton</u>	ZIP <u>92831</u>	TELEPHONE <u>(714) 449-2990</u>	
SEALING MATERIAL / ESTIMATE AMOUNT OF SEALING MATERIAL NEEDED <u>Bentonite Grout</u>		PROPOSED START DATE <u>10/27/05</u>	
METHOD OF DESTRUCTION <u>Airknife utility clearance, over-drill upper five feet of well casing, pressure grout.</u>			
DIAGRAM OF WELL SITE (Use additional sheets and/or attachments) <u>SEE ATTACHED FIGURE</u>		I HEREBY AGREE TO COMPLY IN EVERY RESPECT WITH ALL REQUIREMENTS OF THE HEALTH CARE AGENCY AND WITH ALL ORDINANCES AND LAWS OF THE COUNTY OF ORANGE AND OF THE STATE OF CALIFORNIA PERTAINING TO WELL CONSTRUCTION, RECONSTRUCTION AND DESTRUCTION.	
<input checked="" type="checkbox"/> SITE PLAN ATTACHED		<u>DAVE BANCHERO</u> <u>10/20/05</u> APPLICANT'S SIGNATURE DATE	
		<u>DAVE BANCHERO</u> PRINT NAME	
		<u>949-428-8993</u> <u>428-8995</u> PHONE NUMBER FAX NUMBER	
FOR ACCOUNTING USE ONLY: HSO NO. <u>192104</u> CHECK NO. <u>1605</u> DATE <u>10-20-05</u> AMOUNT <u>\$555 -</u> INTL. <u>hl</u>		DISPOSITION OF PERMIT (DO NOT FILL IN): <input checked="" type="checkbox"/> APPROVED SUBJECT TO THE FOLLOWING CONDITIONS: A. <input checked="" type="checkbox"/> NOTIFY THIS AGENCY AT LEAST 48 HOURS PRIOR TO START. B. <input type="checkbox"/> SUBMIT TO THE AGENCY A WELL DESTRUCTION REPORT. PLEASE REFERENCE PERMIT NUMBER. C. <input checked="" type="checkbox"/> OTHER <u>REMOVE TRAFFIC BOYS + COVER ALSO</u> <input type="checkbox"/> DENIED	
APPROVAL BY OTHER AGENCIES: JURISDICTION _____ REMARKS _____ <u>PALE</u> AUTHORIZED SIGNATURE DATE		<u>DAVYOKOYAMA</u> <u>10/24/2005</u> PERMIT ISSUED BY DATE <u>DAVYOKOYAMA</u> <u>(714) 433-6288</u> PRINT NAME PHONE NUMBER	

WHEN SIGNED BY ORANGE COUNTY HEALTH CARE AGENCY REPRESENTATIVE, THIS APPLICATION IS A PERMIT.